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EDUCATIONAL WRITINGS

I. RECENT ARTICLES AND BOOKS ON THE JUNIOR HIGH SCHOOL

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The most comprehensive report on the junior high school is that published by the National Society for the Study of Education in Part III of the *Fifteenth Yearbook*.¹ This report begins with a historical survey of the junior high-school movement and then proceeds with a discussion of the physiological and psychological grounds for the new movement. It then takes up the curriculum in each of the subjects commonly included in these schools, giving a number of examples of typical courses of study as these have been actually worked out at different centers. The fourth chapter deals with problems of administration and supervision and describes the different types of junior high schools to be found in different parts of the country. The volume was prepared by Mr. Douglass, whose article, published in June, 1915, in the *Pedagogical Seminary*, was one of the most complete of the early summaries of this movement. In the preparation of this report Mr. Douglass sent out numerous inquiries to superintendents in different parts of the country, and the volume gives, more than any other single source now available, an account of what is being undertaken in different parts of the country, as well as the opinions of educators in all sections as to what ought to be undertaken in junior high schools.

There are several other reports which contain general information of somewhat the same type. The North Central Association of Colleges and Secondary Schools has considered the matter of the junior high school in elaborate committee reports during the last two sessions. Unfortunately the reports of the two committees

¹ Aubrey Augustus Douglass, "The Junior High School," *The Fifteenth Yearbook of the National Society for the Study of Education*, Part III, 1916. Pp. 157.

are accessible at the present time only in the form of the programs used at the meetings themselves.¹ In all probability the forthcoming proceedings of the North Central Association will include the results of the deliberations of the two years past. The committee report discusses the difference between elementary courses and advanced courses, and aims in various departments to show that it is feasible to draw this distinction and important that the distinction should be drawn in order that the value of high-school courses for college admission and graduation shall be proportional to the amount of work which the student is called on to do. For example, if ancient history is to be taught in the early part of the high-school curriculum, it undoubtedly ought to receive less credit than if the same subject is taught in a senior high-school course. The programs of the North Central Association are more concerned with matters of college admission than with the details of the junior high-school program, but the investigations carried on by the committee will be useful to those who are aiming to arrange the courses of study for junior high schools.

Two articles by Joseph Abelson² in *Education* include a list of cities where junior high schools have been organized and a summary of the arguments for and against such an organization. These articles also give a brief summary of the history of this movement during the last ten or fifteen years and include a bibliography.

The background for the present movement lay in a series of committee reports presented to the National Education Association during the early years of this century. In 1905, in 1907, and in 1909 in a succession of reports the National Education Association discussed a six-year elementary-school program. Indeed, the discussion was first opened in 1893 by the Committee of Ten, which advocated an extension downward of the secondary-school curriculum. The contention of the Committee of Ten did not receive

¹ *Program of the Twenty-first Annual Meeting of the North Central Association of Colleges and Secondary Schools*, 1916. Pp. 67. Also reprinted for the Twenty-second Meeting, 1917.

² Joseph Abelson, "A Study of the Junior High School Project," *Education*, September, 1916, pp. 1-19; "A Bibliography of the Junior High School," *Education*, October, 1916, pp. 122-29.

favorable recognition from elementary-school officers. It was not until school superintendents in charge of grade schools began to realize that they must modify the course of study in the elementary schools that the movement really made headway. Historically the junior high school is not an extension of the high school downward so much as it is an enrichment of the seventh and eighth grades.

Another useful bibliography and summary of the movement appear in a bulletin of Middlebury College.¹ This bulletin announces summer courses on the junior high school in a very interesting way. It summarizes the arguments in favor of the movement and gives a brief description of the courses of study which are followed in different institutions. It also presents the arguments on the opposite side and, in conclusion, gives references to the literature.

Still another bibliography and summary appear in the report of a committee of the High School Masters' Club of Massachusetts.² This particular pamphlet also gives a list of the places where a junior high school is organized and performs one function that none of the other reports serves. It gives a comparative table of the courses in European schools which may properly be compared with the junior high school in this country. This contribution is important because the fact is frequently overlooked that the junior high school resembles closely the earlier years of German, French, and English secondary schools.

The state department of Minnesota has issued a bulletin on the junior high-school problem³ which summarizes the courses of study given in a number of such institutions and gives the opinions of a number of educators on various aspects of the organization of this institution. Brief statements are included regarding comparative costs and regarding the advantages and disadvantages of this type of organization. The pamphlet is intended to encourage the schools of Minnesota to consider this type of organization.

¹ Frank E. Howard, "The Junior High School," *Middlebury College Bulletin*, September, 1916. Pp. 43.

² *Report of Committee on the Junior High School Presented to the High School Masters' Club of Massachusetts, March 17, 1917.* D. C. Heath & Co. Pp. 43.

³ E. M. Phillips and C. H. Barnes, "The Junior High School Problem," *Bulletin No. 59*, Minnesota Department of Education, 1916. Pp. 25.

The High School Teachers' Association of New York City has printed a brief report which was prepared by Professor Briggs and Mr. Abelson.¹ In a compact form it gives the statements which these men have printed elsewhere and a bibliography of the leading articles on the subject.

The foregoing references make it possible for anyone who wishes to become acquainted with this movement, on the side of either its literature or its actual practice, to find out the sources of information and at the same time to answer most of the questions with regard to the movement that would naturally arise. The impression left on one's mind by reading over these various statements is that the movement is at the present time highly experimental. All sorts of notions exist with regard to the meaning of this type of organization and its proper form. The relation to the elementary schools on the one side and to the high schools on the other is variously conceived. The courses of study, while they show some tendency to include the work formerly regarded as exclusively appropriate for the high school, include much work that has all along been included in the seventh and eighth grades. The methods of instruction are discussed as of special importance in determining the place and function of the junior high school. Departmental teaching, as distinguished from grade teaching, is perhaps the most common characteristic emphasized. Supervised study is sometimes mentioned as especially important. The training of teachers and their equipment are frequently discussed as matters of significance, it being agreed that teachers should have a somewhat better equipment than is common in the elementary schools.

From these general statements and reports we may turn, first, to a series of discussions which represent divergent views with regard to the character of the junior high school and, secondly, to contributions which make an effort to define in detail the various courses of study in special subjects.

Two references to the writings of Professor Snedden may be first considered. The last chapter of his book on *Problems of Secondary Education* and an article in *Educational Administration*

¹ "The Junior High School," *Bulletin No. 59* of the High School Teachers' Association of New York City, January, 1916. Pp. 28.

and Supervision present vigorously the view that the junior high school should be treated as a separate unit of school organization, fundamentally different in its motives and organization from the elementary school on the one hand and from the high school on the other.¹ Professor Snedden has long been a critic of the school system of the United States as it now exists. He is constantly advocating the organization of special courses for pupils who are to enter the industries. He sees in the junior high school an opportunity to provide differentiated courses beyond the sixth grade, and his whole conception of the junior high school is colored by this view. His argument is very emphatic that the junior high school should in no wise come under the domination of the colleges as has the senior high school. He would leave the high school free for its own sake to begin its work without any entangling alliances with the schools below. He believes that many children between twelve and fourteen years of age should be given a course of study that is entirely different in its ideals from the ordinary high-school curriculum. Even where these twelve-year-olds are going on they should have a distinct kind of treatment in this transition period. So far as the relations of this unit to the elementary school are concerned, they are defined in his article in *Educational Administration and Supervision* in the statement that children from twelve to fourteen years of age are unique in their social and intellectual characteristics and need to be given a course under conditions very much more flexible than those which ordinarily appear in elementary schools. If flexibility can be secured by administrative devices such as the organization of an intermediate school, Professor Snedden is in favor of the organization, but he is distinctly in favor of a classification of this school as an intermediate school rather than as a part of the high school. Hence also his preference for the name intermediate school.

In fundamental opposition to this position is the contention which has been ably defended by Professor Briggs in *Education*

¹ David Snedden, "The Intermediate High School," chap. xxv, pp. 318-30, *Problems of Secondary Education* (Houghton Mifflin Co., 1917); "Reorganization of Education for Children from Twelve to Fourteen Years of Age," *Educational Administration and Supervision*, II (September, 1916), 425-32.

that a thoroughgoing reorganization of all of the activities of public schools will be induced through the organization of the junior high school.¹ A brief quotation from his article states the case very clearly.

The junior high school is an opportunity, not a specific; and unless you have a definite program for the reform of the curricula, of the courses of study, of the methods of teaching, and of the social administration of your intermediate grades, I strongly urge you to defer the organization of junior high schools to your successors.

In this statement Professor Briggs summarizes the argument of his whole paper. He has been recommending a socialized recitation, a better form of supervised study and school discipline, and an enrichment of the program which shall bring to the pupils of the elementary school more material than they have encountered in the old-fashioned course of study. These fundamental changes might be worked out under existing forms of organization, but they are less likely to come than they will be under a definite plan for the reorganization of the whole school system. This plan of reorganization is, however, not a separate matter which leaves the high school in a position to go on with its ordinary work unaffected; nor should the elementary school be regarded as untouched by the separation of the junior high school from the rest of the program. The program of reform is here a far-reaching program.

A similar broad conception of the influence of the junior high school on the whole school organization is that expressed by Professor Johnston in a general article introducing the special number of *Educational Administration and Supervision* devoted to the junior high school.² Professor Johnston reviews the movement from a number of different points of view, dealing with the reorganization of the curriculum, with the training of teachers, with the effect on the school population and the material plant, and making it clear that in his view the junior high school is the center of a radiating influence which will affect both the upper and the lower school. He says, "Meaning in a restricted sense reorganization of

¹ Thomas H. Briggs, "Possibilities of the Junior High School," *Education*, XXXVII (January, 1917), 279-89.

² Charles Hughes Johnston, "The Junior High School," *Educational Administration and Supervision*, II (September, 1916), 413-24.

the three intermediate grades, it in reality means reorganization of the entire public school system."

That the junior high school will reach upward in its influence and ultimately affect the colleges is brought out in a paper by Mr. Snively in the *Educational Review*.¹ Mr. Snively calls attention to the fact that the organization of the junior high school results in a larger retention of the pupils in the schools. It makes it possible for the student to begin earlier his preparation for college and to accomplish the full work of preparation at an earlier date in his individual life. All of these economies will so redound to the advantage of the college that that institution will be greatly benefited by the reorganization lower down.

Superintendent Weet, of Rochester, New York, has described in detail the work of the Rochester junior high school in *American Education* and in *Educational Administration and Supervision*.² He gives a statement of the origin of this movement in Rochester, of the course of study as it is organized, and of the effects of the administration of this course. There is no clearer and more definite statement in the literature than this statement of Superintendent Weet about the Rochester schools. School officers who are planning this type of organization should make themselves acquainted with the details of the Rochester program. It is comprehensive; it includes science and civics, an enrichment of the program in English, an opportunity to take up foreign languages, art work, and the type of general mathematics which carries the student far beyond ordinary arithmetic. It also includes technical courses.

Another source of detailed information with regard to the course of study in a single city is the *Handbook of the Detroit Junior High Schools*.³ This gives reading references and the various topics to be followed in each of the subjects taught in the junior high schools. It is an administrative handbook to be put into the hands

¹ Guy E. Snively, "The Junior High School and the College," *Educational Review*, June, 1916, pp. 40-49.

² Herbert S. Weet, "A First Step in Establishing the Six-Three-Three Organization," *American Education*, XIX (May, 1916), 524-33; also in *Educational Administration and Supervision*, II (September, 1916), 433-47.

³ *Handbook of the Detroit Junior High Schools, 1916-1917*. Published by the Board of Education. Pp. 118.

of teachers and resembles the pamphlets describing the course of study which are commonly distributed by superintendents to teachers in the elementary schools. A study of these courses makes it clear that the junior high schools of Detroit aim to include a large amount of high-school work. At the same time, through courses in manual training, applied physics, and domestic science, the junior high schools provide ample opportunity for those students who are not planning to go on with high-school courses.

One of the most obvious facts about this whole movement is to provide for at least two distinct classes of students—those who are going on and those who are to terminate their education with the junior high-school course. That both of these tendencies appear in all of this literature ought to correct the impression which is abroad in some quarters that the junior high-school organization is intended chiefly to meet the needs of pupils who would otherwise leave school. There is in all of the references clear indication that this need of pupils who are not going on is to be met, but there is just as much demand for economy in the training of pupils who are going into high school as for pupils who are terminating their course.

It remains to make reference to a number of articles which discuss the courses of study in particular subjects. In this connection the article by Mr. Stacy on the training of teachers for the junior high schools¹ suggests one of the major difficulties in organizing these schools. Such teachers must not be narrow specialists, nor, on the other hand, can they be allowed to fall behind in subject-matter. They must have a broader training than the high-school teacher, and they must study methods and adolescent psychology. This requires that some institution give special training for this new type of teacher; neither the ordinary high-school teacher nor the ordinary upper-grade teacher will satisfy the demand.

Further reasons why the demand is a special one appear the moment we begin to look into the particular subjects. Unless the special demand is recognized, the movement is likely to be a mere change in name without any real influence on school work. This

¹ C. R. Stacy, "The Training of Teachers for Intermediate Schools," *Educational Administration and Supervision*, II (September, 1916), 448-55.

danger is impressively set forth in an article by Mr. E. H. Taylor. Mr. Taylor discusses the course in mathematics in the junior high school in *Educational Administration and Supervision* and summarizes his investigations in the following statement:¹

I have recently examined the courses of study of a number of junior high schools. In the most of these the course of study is the conventional one, arithmetic required in both the seventh and eighth grades. In one a composite course of arithmetic, algebra, and geometry is offered in the seventh and eighth grades, and in two others such a course is offered in the eighth grade. No general conclusion is to be drawn from the data at hand, but so far as it goes it indicates that the change from the four-year to the six-year high school has had but little effect upon the course of study in mathematics.

This statement is based on a brief review of the efforts which have been made in this country to introduce algebra into the upper grades of the elementary school. Most of these efforts have not been eminently successful.

In the *Mathematics Teacher* for December, 1916, Mr. Evans discusses mathematics very briefly in the interests of a committee which is trying to work out some plan for the reorganization of mathematics in the intermediate school.² It is evident from this report that the impression is entertained in many quarters that arithmetic as now taught in the seventh and eighth grades is not satisfactory. Clearly implied, also, is the position that the introduction of higher mathematics will encounter some difficulty and that the subject-matter of algebra and geometry must be largely reorganized before it can be used in this lower school.

One impressive fact which comes out in these discussions of mathematics is the fact that we shall probably have to wait for some time before the mathematicians as a class realize the possibility of introducing into the junior high school a productive course in geometry, but it may be predicted with great assurance that in the long run geometry will be found to be a very practical and stimulating subject for students of the junior high-school age.

¹ E. H. Taylor, "The Course in Mathematics in the Junior High School," *Educational Administration and Supervision*, II (September, 1916), 460-65.

² George W. Evans, "Mathematics for the Junior High School," *Mathematics Teacher*, IX (December, 1916), 73-76.

Such a modification of the mathematics course as would follow the introduction of geometry into this intermediate school would serve large intellectual and social purposes. The student would become acquainted with the fundamentals of mathematical science in a direction which would be of immediate use to him, and the student who is not going to go on would be trained in certain principles which can very advantageously apply in the practical arts.

More progressive than the mathematicians are some of the teachers of science. To be sure, the science movement which has culminated in courses in general science is having some difficulty because high-school administrators and teachers do not receive general science hospitably, and advocates of this type of organization are evidently beginning to realize that they may have to look for their legitimate opportunity to carry on the general work in the seventh and eighth grades. In the *General Science Quarterly* for November, 1916, Mr. Carpenter presents an argument for the incorporation of general science into the junior high-school curriculum.¹ He gives an account of the success of this work in the schools of Rochester.

The English teachers also realize the possibility of doing more productive work in the seventh and eighth grades than has heretofore been possible. Miss Lawson, in an article entitled "The Socialization of Language Study in the Junior High School," gives a program for English which is devoted to vocational ambitions and their treatment.² Pupils in the seventh grade are to write papers on their experiences in earning money, the kind of work into which they wish to go, how to look for a position, and so on. The subject-matter in all of these cases is supplied by the studies of vocation which are very appropriate for pupils of this age. The problem of finding suitable subjects for school compositions is solved at the same time because the formulation of the pupils' findings in these matters furnishes the best kind of an opportunity to give practice in oral and written expression.

¹ Harry A. Carpenter, "General Science in the Junior High School at Rochester, Part I, Organization and Aims," *General Science Quarterly*, I (November, 1916), 46-53.

² Mary F. Lawson, "The Socialization of Language Study in the Junior High School," *Pedagogical Seminary*, XXIII (March, 1916), 76-85.

Finally, the history teachers and the advocates of social science in the schools are likely to find a means of getting together in the opportunity which the junior high school affords for a lengthened high-school curriculum. History has been making its way slowly into the high-school course of study, and the teachers of this subject are very reluctant to give up any of the ground which they have gained in economics, civics, and the other social sciences. For some years the contest has been going on in the effort to distribute the small amount of time which can be given to social studies. If now the period of the high school is extended to six years and economic subjects can be introduced both at the beginning and at the end of this lengthened course of study, it may be that a suitable compromise can be reached so as to include history courses and at the same time give the other social subjects an opportunity to be presented to the students.

In the *History Teacher's Magazine* for January, 1917, there is a full discussion of the program in history by a committee of the National Education Association.¹ This committee report makes a place in the grades, to be included in the junior high school, for civics, which is thus laid at the foundation of the curriculum in history.

Mr. Dunn, in *Bulletin No. 28* of the series of 1916 of the Bureau of Education, lays out a much more ambitious program and leaves the history course much less at the center of the curriculum which he outlines than does the report of the committee on history.² It may be too optimistic to believe that a compromise can be reached through the organization of the junior high school, but it is clear that some reorganization of the work in history in the upper schools is sure to take place, and that this reorganization is likely to include in larger measure than heretofore social studies other than history.

¹ "The Social Studies in Secondary Education, Report by a Committee of the National Education Association," *History Teacher's Magazine*, VIII (January, 1917), 4-25.

² Arthur W. Dunn, "The Social Studies in Secondary Education," *Bureau of Education Bulletin No. 28*, 1916. Pp. 63.

II. COMMENT ON RECENT EDUCATIONAL WRITINGS

1. Not less than ten pedagogical manuals dealing particularly with arithmetic have appeared in recent years.¹ Dr. Klapper's book² appeals to the writer as deserving of much more than passing notice.

The distinctive purpose of the book is "to evolve a plan of teaching which is based on approved psychology of number, which incorporates the lessons of contemporary research in methodology and which has stood the final test of experience." The book is a manual of methods of teaching arithmetic.

The values of the teaching of the subject are given a brief treatment of 12 pages, one-half of which deals with disciplinary values and the mooted question of the transfer of training. In this connection it is to be observed that the author's choice of terms is somewhat unfortunate. For example, on p. 2 he contrasts "practical values" with "traditional values," and "cultural values" are distinguished from "disciplinary values," which are very commonly treated synonymously so far as arithmetic is concerned. The value of the work could have been enhanced by a brief historical sketch of the development and teaching of arithmetic, thus giving teachers and supervisors a better perspective, a "mountain-top" view of the field. A tendency has been noted to take quotations out of their setting. For example, we may note the use made of two quotations from Dr. Young in the first chapter, particularly the first one on p. 4, which is used as asserting the disciplinary values of arithmetic, whereas its author does not so use it. The second quotation (p. 6) is taken out of its setting and is likely to be misleading as to the stress laid upon it originally by its author.

The conclusion of this first chapter, "A course of study in arithmetic, selected and organized with the utilitarian aim in view, can be so taught that all other values are attained in their fullest measure," will scarcely meet with opposition today.

¹ This review was contributed by Mr. Charles C. Root, graduate student in education, University of Chicago.

² *The Teaching of Arithmetic*. By Paul Klapper. D. Appleton & Co., 1916. Pp. 387.

A good discussion of the different modes of developing a course of study is given. Significant topics which come in for treatment in this connection are: "Maximum and Minimum Courses," "Omissions from Traditional Course," and "Algebra and Geometry in the Elementary Course." The last named could well have received more attention than is accorded it. This chapter will be found useful by superintendents, principals, and supervisors.

The two chapters on "General Principles" and the one on "Organization of a Recitation" cannot fail to be very helpful to teachers in service as well as those in training. Besides a discussion of methods of teaching arithmetic, which are usually included, such topics as humanizing arithmetic, motivation, objective teaching, habits, drill, speed and accuracy, oral arithmetic, and home work are thoroughly treated. The introduction of the term "algorism" certainly adds nothing to the value of the book from the point of view of teachers in service. Some suggestions and illustrations of lesson plans would have proved beneficial.

Two hundred pages, more than half the book, are given to a discussion of the teaching of the number concept, fundamental operations, common and decimal fractions, percentage, and arithmetical applications. These pages abound in methods, illustrations, and devices which are psychologically and pedagogically sound. The reviewer heartily approves the emphasis placed upon longitudinal correlation, such as the relation of subtraction to addition on p. 170. These chapters will fill a long-felt need of many earnest teachers who are desirous of improving their classroom work in arithmetic. Exception is here registered to the use of the term "quotition" (p. 202) to designate the form of division represented by dividing 16 cents among children giving each child 2 cents. Why not call it "measuring," as we always have done, if it must be named? The emphasis on "short cuts" (pp. 209 ff.) is commendable, although some of those suggested might better be omitted, for example, the multiplication by 375 and by 625 and 750. The suggestion for the teaching of statistical elements marks the book as "up to the minute," and it is to be hoped that this idea will receive wide acceptance.

The last point to be noted is the prominence given to the scientific measuring of the results of instruction. It is deserving of even more space, but this is the only work that treats this subject at all. The author admits that it is not a complete treatment. The need for scientific tests and standards is clearly pointed out. A bird's-eye view of the development of the movement is also given, the works of Rice, Stone, and Courtis appearing in chronological order. The Courtis tests and standards are pronounced the most scientific and are reproduced, Series A in the text and Series B in the appendix. Good descriptions and critical comments accompany them. The kinds of questions answered by tests and their uses as aids in constructive supervision and administration are clearly indicated. Dr. Klapper very properly points out the danger of formal tests leading to routine work and emphasizes the use of standards merely as tentative norms to measure progress. Their importance as a means of diagnosing individual cases is also indicated.

There is really no need for reprinting the Rice and Stone tests. Neither are critically evaluated, and hence there is danger of teachers using them when there would be no value in so doing. Neither have been standardized from the standpoint of establishing norms. Furthermore, the relative difficulty of the problems in Rice's tests have not been determined. Stone's tests are for 6 A grade only. No mention is made of the Cleveland spiral tests. Only bare mention is made of the Courtis practice tests (p. 16). They deserve more, and the Thompson and Studebaker practice material should also have been mentioned unless the latter may have appeared too late.

2. Professor Betts¹ has published a book that will be very helpful to elementary teachers. We have had many books on general and special method for the elementary school. We have had no book, however, which has attempted to systematize the recent quantitative work that has been done in connection with the elementary subjects and which has worked the results into a statement

¹ *Class Room Method and Management*. By George Herbert Betts. Indianapolis: Bobbs-Merrill, 1917. Pp. 386.

of general principles of education. The title of the book is in part misleading. It is really a rather systematic treatise on the principles of education and general principles of method in teaching, together with a statement of method applied specifically to each of the common branches.

For example, Part I, which is devoted to a discussion of general method, makes use of what Professor Betts calls the "four cardinal elements which comprise method." These to him are (1) the determination of *aim*, (2) the selection of material, (3) the organization of subject-matter for instruction, (4) presentation or the technique of instruction. He states the outcomes of instruction in the elementary subjects as (1) fruitful knowledge, (2) right attitudes, (3) applied skills. The book exhibits a clear recognition of the need for specific statements of the problem of teaching the particular subjects in the course of study. His chapters on "Training to Right Attitudes," the development of the "Knowledge Side of Education," and "Developing Skills" will be very stimulating to the young teacher and should tend to orient her in connection with her classroom problem.

In Part II he discusses method in teaching, applied specifically to reading, spelling, language, arithmetic, geography, history, civics, physiology and hygiene, agriculture, and home economics. In each case he makes use of his four cardinal elements of method and tries to summarize the conclusion from the recent scientific work in learning and teaching in each of the elementary subjects. In spelling this has been done rather well. He states the aims for spelling instruction in terms of knowledge required and skills to be attained, and makes use of the investigations made by Ayres, Jones, and Cook and O'Shea. His discussion of the teaching of spelling ought to be very helpful. His treatment of reading from the standpoint of the "quantitative movement" is quite inadequate. Without making a thorough statement of the use of testing material, and without critical comment, he merely quotes Kelly's *Kansas Silent Reading Test*. One feels that his discussion of reading should have made detailed use of the testing work and experimental teaching that has been reported. The author has not taken advantage of available scientific material in the chapter on the teaching of

arithmetic. A very considerable body of factual and experimental material is now available on this subject and might well have been used more definitely. The measuring movement, although relatively young, has already made a definite contribution to the standardization of the content of the course of study in particular subjects, and has made available material which should result in definite suggestions to teachers of the elementary subjects. We are certainly ready now for statements of definite experimental problems of teaching the elementary subjects in such books as this. More of this kind of statement would have been desirable in this particular book.

We should summarize the situation by saying that this is a book which will be of definite value to prospective teachers of the elementary subjects or teachers who wish to keep abreast of current modes of thinking about school problems.

3. One of the most outstanding needs in determining and correcting juvenile delinquencies as well as in the classification and grading of school children is adequate means for the training of those who are to give diagnostic mental tests. Professor Melville has written a manual¹ which is aimed primarily at satisfying this need. It is addressed particularly to those who make examinations of children in the work of co-operating with larger or more intensive educational and medical efforts. It is a carefully evolved manual of procedure developed out of a series of experimental investigations of mentality testing which have been conducted by the writer in connection with mental surveys in public schools in New York, Princeton, and Philadelphia. The writer's investigations have revealed the need of standardizing each detail of procedure in testing juvenile mentality. Part I of the manual presents a discursive statement of necessary procedure in gathering and analyzing the data. In addition to a very clear statement of general principles, specifically worked-out directions are given to examiners. Standard record forms and general rules concerning repetition of tests, collection, and use of test materials are given.

¹ *Standard Method of Testing Juvenile Mentality, A Uniform Procedure and Analysis*. By Norbert J. Melville. With an Introduction by William Healy. Philadelphia: J. B. Lippincott Co., 1917. Pp. xi+140.

The writer's methods make use of the final revision, 1911, of the Binet-Simon scale. The original tests with the recent modifications are presented in form well adapted for use by the examiner. Each plate is accompanied by detailed notes commenting on the practice of other investigators and making suggestions for scoring which should be of immediate help to the examiner. Outstanding in the whole discussion is an attempt to standardize, to make uniform, the whole procedure of Binet testing.

The standard method developed by the writer of this manual is well characterized as "provisional." We should note, however, that at the same time it is the outcome of more detailed research and gives more adequate attention to details of mental testing than does any such manual which we have yet seen.

4. Professor Davis' *Public Secondary Education*¹ is a brief *historical* sketch of secondary education with *special reference to secondary education in the state of Michigan*. The first two chapters contain a short statement of the development of the colonial Latin school and of the early American academy in the so-called Middle Period, largely abstracted from Brown's *The Making of Our Middle Schools*. One is impressed with the fact that, in order to get a background for the detailed story of secondary education in Michigan, Professor Davis has felt obliged to condense an already available and almost classic discussion of the development of our secondary schools. The hurried reader, however, will find in these preliminary chapters a clear, fairly concise, and interestingly written background story which will orient him in his consideration of the problem of secondary education in Michigan. Chapters iii and iv likewise can hardly be said to have involved original historical research. They describe the development of the early Northwest with special reference to the stages of development of secondary education in this region and the history of early Michigan. Methods by which education was supported and developed in the early days are discussed. Chapters v-ix inclusive—about half

¹ *Public Secondary Education*. By Calvin Olin Davis. Chicago: Rand McNally & Co., 1917. Cloth. Pp. xiii+270.

the book—represent Professor Davis' more detailed research into the development of secondary education within the state of Michigan. He aims to exemplify in this book the current pedagogical theory that "believes pretty thoroughly in the study of a few type forms in order to derive a general knowledge of the entire related field. . . . In studying the history of public secondary education in Michigan one is, therefore, studying the general history of public secondary education in the entire United States. The system of Michigan is but a type. The systems of the other states differ from it in details, but not strikingly in fundamental principles and characteristics. The study is in fact a study of public secondary education in America viewed through the lenses of Michigan's history and Michigan's current practices." Chapter ix takes up the stages in the development of the high school during the "High-School Era," 1860-1900. The trend of education downward from the university and the influence of the state university in the development of the high-school course of study are shown. There is no attempt to bring the story down to date, contemporary tendencies being left to another book to be published later.

5. The writer of a successful school book on *Money* should have had contact with actual business conditions, actual classroom problems in the elementary and secondary school, schoolboy and school-girl nature, and actual commercial conditions from the educational standpoint. Mr. Hayward¹ of the Washington Irving High School, New York, is eminently well fitted to write the book that he has recently published. It is a book intended for the upper grades of the elementary school or the lower grades of the high school. It would make a most desirable textbook for junior high-school commercial courses. The author has been head of the commercial department of a large city high school, has had business experience of several years, has conducted a private business school, and has been editor of the *Efficiency Society Journal*. He has written into this book the practical outcome of his experience in contact with

¹ *Money, What It Is and How to Use It*. By William R. Hayward. Boston: Houghton Mifflin Co., 1917. Pp. xi+162.

these different kinds of groups. As the writer of the introduction of this book has said—

In intermediate classes and in the early years of the high school this book will lead the pupils to grasp the motive of the whole commercial course. It will present the economic basis for the intelligent study of history and current events, it will give the classes in English a reading text of inspiring style and practical content. In prevocational classes and continuation schools it will link the school with the job.

The book is more than a book on *Money, What It Is and How to Use It*. It takes up, in a style suited to the pupils of intermediate grades, problems of banking, stocks and bonds (partnerships, joint-stock companies, corporations, etc.), problems of stock speculation, principles of exchange and clearing-houses, practical monetary problems in which the home is intimately concerned, principles of travelers' checks, letters of credit, etc., and accepted methods in buying, selling, paying for, and delivering goods. The book will appeal to teachers of this subject in the intermediate school, not only for its content and splendid organization, but more especially for the clear way in which the material is presented.

6. Students of engineering and the physical sciences have long needed a compact handbook of the established propositions of physical science. Under the title *Laws of Physical Science* Dr. Northrup¹ has prepared just such a handbook. Organizing the material in the categories, (I) "Mechanics," (II) "Hydrostatics, Hydrodynamics and Capillarity," (III) "Sound," (IV) "Heat and Physical Chemistry," (V) "Electricity and Magnetism," and (VI) "Light," the writer has brought together the established laws and principles of these sciences. The book should appeal to that particular group of undergraduate and advanced students who desire a complete reference book giving the laws which have been established in each of the sciences, the corresponding formulae, and a brief description of the meaning of the symbols used. The book does not pretend in any way to present a systematic scheme of thinking in the physical sciences. It is, as its title suggests, merely a reference book.

¹ Philadelphia: J. B. Lippincott Co., 1917. Cloth, \$2.00.

The reader is impressed with the fact that no consistent principle of organizing these laws and formulae has been followed out in the construction of the book. Each law or proposition is presented under a definite heading or title. For example, Newton's three laws of motion appear under the captions "Newton's First Law of Motion," "Newton's Second Law of Motion," etc. Other illustrations of the titles used may be given as follows: the law of falling bodies, descent on an inclined plane, general mechanical principle, composition by parallelogram rule, velocity of sound in air, expansion of bodies with heat, etc. Each law is followed by one and in some cases by several references to easily accessible textbooks, standard treatises, etc., where detailed and systematic treatment is given of these propositions. This is not the least important contribution of the book.

III. CURRENT EDUCATIONAL PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL THEORY AND PRACTICE

- BEALL, RACHEL H. (Compiler). *Schoolroom Decoration*. A list of references. The New York Public Library, 1917. Paper. Pp. 6.
- BOURNE, RANDOLPH. *Education and Living*. New York: Century Co., 1917. Cloth. Pp. x+236. \$1.25.
- CLOPPER, EDWARD N. *Farmwork and Schools in Kentucky*. Photos by LEWIS W. HINE. Published by National Child Labor Committee, New York City, March 1917. Pamphlet 274. Paper. Pp. 30.
- HUGHES, JAMES L. *Training the Children*. New York: A. S. Barnes Co., 1917. Cloth. Pp. 148.
A stimulating, inspiring, constructive series of essays.
- Nebraska Educational Bulletin*. Special Edition. Vol. II, December, 1916, No. 3. "Courses of Study in Hygiene and Sanitation." Paper. Pp. 44.
- STRONG, EDWARD K., JR. *Effects of Hookworm Disease on the Mental and Physical Development of Children*. International Health Commission Publication No. 3. New York: Rockefeller Foundation, 1916. Pp. 121.
- WILKINSON, WILLIAM ALBERT. *Rural School Management*. Boston: Silver, Burdett & Co., 1917. Cloth. Pp. xiii+420.
- WILSON, MATTHEW HALE. *An Inductive Study of Standards of Right*. Boston: Richard G. Badger, 1916. Cloth. Pp. 321. \$1.50.
A detailed view of the main activities of society with application of the moral principles which guide to correct conduct. Social, ethical, and vocational guidance.

TEXTS AND SUPPLEMENTARY BOOKS

I. FOR THE ELEMENTARY SCHOOL

BAKER, FRANKLIN T., and THORNDIKE, ASHLEY H. *Everyday Classics*. New York: Macmillan, 1917. Illustrated. Cloth. 12mo. Third Reader, pp. 272, \$0.48; Fourth Reader, pp. 352, \$0.56; Fifth Reader, pp. 384, \$0.60; Sixth Reader, pp. 416, \$0.65.

Constructed on the principle that there is a considerable body of good literature known to all people who know books, and simple enough to be understood and enjoyed by children.

Barnes, A. S. Co. *Teachers' Manual. The Method Used in the New Barnes Readers*. Primer and Book One—First Year. New York, 1916. Paper. Pp. 46.

GARRETT, LAURA B. *Study of Animal Families in Schools*. New York: Bureau of Educational Experiments, Bulletin No. 2, 1917. Pp. 19. \$0.10.

How the love of children for animal pets—a need of childhood—was made the basis of mental development.

HAAREN, JOHN H. *Natural Free-Hand Writing Based on Muscular Movement Exercises*. Manuals 1, 2, 3, 4, 5, 6. Boston: D. C. Heath & Co. Paper.

Emphasis on rapidity and rhythm. Each manual contains a graduated series of exercises with directions, and No. 1 discusses "position" and teaching devices.

KELLER, HELEN. *The Story of My Life. (The Riverside Literature Series.)* Boston: Houghton Mifflin Co., 1904. Cloth. 16mo. Pp. 140. \$0.44 net. Simple, direct, encouraging, inspiring.

MARTEN, WILLIAM S. *Manual Training—Play Problems*. With working drawings and illustrations of several hundred various problems. New York: Macmillan, 1917. Cloth. 8vo. Pp. 147. \$1.25. Problems have practical bearing.

MCCALEB, WALTER FLAVIUS. *Happy. The Life of a Bee*. Illustrations and Decorations by CLEMENT B. DAVIS. New York: Harpers, 1917. Cloth. Pp. 119. \$0.75.

New York, Bureau of Educational Experiments, 1917. *Playthings*. Bulletin No. 1. Pp. 15. Paper. Illustrated. \$0.10.

A stimulating contribution to the value of play in physical and mental growth.

PEIXOTTO, EUSTACE M. *Ten Boys' Farces*. With an Introduction on impromptu dramatics. Boston: Walter H. Baker & Co., 1916. Paper. Pp. 107. \$0.25.

PERKINS, LUCY FITCH. *The Cave Twins*. Boston: Houghton Mifflin Co., 1916. Illustrated. Cloth. 12mo. Pp. 165. \$0.56.

For fourth or fifth grade. Supplementary reading, dramatization, and constructive work.

- PERRY, L. DAY. *Seat Weaving*. Peoria, Ill.: Manual Arts Press, 1917. Cloth. Illustrated. Pp. 84. \$1.00.
Contains methods and suggestions for the use of a variety of materials.
- TOWERS, WALTER KELLOGG. *Masters of Space*. New York: Harpers, 1917. Cloth. Illustrated. Pp. 301. \$1.25.
How Morse, Thomson, Bell, and Marconi made talking possible.
- VAN DEUSEN, CLINTON S. *Demonstrations in Woodwork*. Peoria, Ill.: Manual Arts Press. Sets 1, 2, 3. Cloth. \$1.15.
For both boys and girls, commencing with sixth grade, where elaborate equipments and special teachers are not furnished. Close relation to rural schools.

II. FOR THE HIGH SCHOOL

- ARMAND, EMMA C. *Grammaire élémentaire*. Boston: D. C. Heath & Co., 1917. Cloth. Pp. viii+111. \$0.60.
Simple in style, written in French supplemented by copious exercises.
- ESPINOSA, AURELIO M. *Elementary Spanish Reader*. Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. ix+208. \$0.90.
Simple, idiomatic, practical readings to accompany the introductory lessons in Spanish.
- HESSLER, JOHN C. *The First Year of Science*. Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. xiii+484, Laboratory Exercises. Pp. ix+118. With Manual, pp. 626, \$1.45; without Manual, pp. 498, \$1.25; Manual, pp. 128, \$0.65.
- HOUSE, RALPH E., and BABCOCK, EARLE B. *Trois Contes de Theuriet*. New York: Henry Holt & Co., 1917. Cloth. Pp. viii+185.
- MORRIS, JOHN E. *Europe in the Nineteenth Century (1815-1878)*. Cambridge: University Press, 1916. 12mo. Pp. 278. 2s. 6d.
- OPDYCKE, JOHN B. *Working Composition*. Boston: D. C. Heath & Co., 1917. Cloth. Illustrated. xiii+337. \$1.28.
Aims to link up English composition with work and all other sorts of human experience; the basis is life-needs.
- SHERIDAN, R. BRINSLEY. *The School for Scandal*. Collated and edited by HANSON HART WEBSTER. (The Riverside Literature Series.) Boston: Houghton Mifflin Co., 1917. Cloth. Pp. liii+145. \$0.55 net.
- STEMPEL, GUIDO H. (Editor). *A Book of Ballads Old and New*. New York: Henry Holt & Co., 1917. Cloth. Pp. xxxviii+329.
A good selection of old, American, and new ballads.
- STONE, JOHN C., and MILLIS, JAMES F. *Plane and Solid Geometry*. Chicago: Benjamin H. Sanborn & Co., 1916. Cloth. Pp. x+448.
A revision of the text published in 1910.
- TALBOT, L. RAYMOND. *French Composition*. Chicago: Benjamin H. Sanborn & Co., 1915. Cloth. Pp. x+145.
Exercises in English to be translated into French. English-French vocabulary.

WHITNEY, MARIAN P., and STROEBE, LILIAN L. *A Brief Course in German*. New York: Henry Holt & Co. Cloth. Pp. ix+199.

Based on use of the verb and the phrase according to the direct method. Has demonstrated its worth in Vassar and in several high schools.

PUBLICATIONS OF UNITED STATES BUREAU OF EDUCATION

ANDREWS, BENJAMIN F. (Compiler). *Registration and Student Records for Smaller Colleges*. Department of the Interior, Bureau of Education, Bulletin No. 33, 1916. Washington: Government Printing Office, 1916. Pp. 67.

COOK, KATHERINE M., and MONAHAN, A. C. *Rural School Supervision*. Department of the Interior, Bureau of Education, Bulletin No. 48, 1916. Washington: Government Printing Office, 1916. Pp. 63.

MISCELLANEOUS

BACON, CORINNE (Compiler). *Children's Catalog of Thirty-five Hundred Books*. New York: The H. W. Wilson Co., 1917. Cloth. Pp. 527. Extended notice later.

CORCORAN, REV. T. *State Policy in Irish Education*. New York: Longmans, Green, & Co., 1916. Cloth. 8vo. Pp. 235. \$2.00.

CRABB, GEORGE. *Crabb's English Synonymes*. New York: Harpers, 1917. With an Introduction by JOHN H. FINLEY, LL.D., Commissioner of Education, State of New York. Cloth. Pp. 769. \$1.25. Extended notice later.

STAHL, JOHN M. *Just Stories*. Chicago: M. A. Donohue & Co., 1916. Paper. Pp. 156. Paper bound, \$0.25; cloth bound, blue and gold, \$0.50, postpaid.

Study of Educational Conditions in Mexico and an Appeal for an Independent College, A. Cincinnati: Published for the Committee, 1916. Paper. Pp. 93.